METHOD AND SYSTEM FOR REMOTE MONITORING, CARE AND MAINTENANCE OF ANIMALS

RELATED APPLICATIONS

[0001] This patent application is a continuation-in-part application of U.S. patent application Ser. No. 14/823,859 filed on Aug. 11, 2015, which is a continuation-in-part application of U.S. patent application Ser. No. 14/191,244 filed on Feb. 26, 2014 (now U.S. Pat. No. 9,131,660), which is a continuation of U.S. patent application Ser. No. 13/892,292 filed 12 May 2013 (now U.S. Pat. No. 8,707,900), which claims the benefit of U.S. Provisional Patent Application No. 61/848,437 filed Jan. 4, 2013, and U.S. Provisional Patent Application No. 61/702,856 filed Sep. 19, 2012. All aforementioned patent applications are incorporated therein by reference.

TECHNICAL FIELD

[0002] The invention relates generally to mechanical systems and, more particularly, the invention relates to a remote controlled personal animal care device.

DESCRIPTION OF THE RELATED ART

[0003] As computers have grown increasingly important in today's society, humans have created animal care devices to automate and enhance various activities that have traditionally been performed manually. Domesticated pets, livestock animals and wild animals maintained in a controlled environment rely in great measure on the care and attention of humans to remain mentally and physically healthy and alert. Items that are assistive in nature to help owners maintain the wellbeing of their animals can provide some portion of such care and attention. Animal owners are often hampered in their attempts to properly care for their animals when the owner is required to be geographically distant from the place their animals are kept. In many cases, animal owners are required to contract with third-party providers to perform simple tasks related to feeding, watering and administering medications to animals when the animal owner is not physically present to do so. Indeed, each year, numerous animals die or are caused physical or emotional harm due to the lack of proper care by owners who are geographically removed from the animal or due to the inadvertent or purposeful oversight of third-party animal caregivers.

SUMMARY

[0004] An animal care system for remote care and maintenance of animals is presented. According to one embodiment of the present disclosure, the system includes a housing and a mobility portion coupled to the housing and operable to move the housing. The system further includes a wireless data communications system disposed with the housing and wirelessly communicatively coupled with an external data communications system and an electronic data processor disposed within the system and controlling the mobility portion. In addition, the system includes food, water and medicine storage portions disposed within the housing. Further, the system includes a removable tray coupled to the housing and disposed proximate to a lower portion of the housing, the tray having a food tray portion operable to receive food from the food storage portion, a water tray portion operable to receive water from the water storage portion and a medicine tray portion operable to receive medicine from the medicine storage portion and a docking portion fixedly coupled to the housing and disposed generally on a rear portion of the housing, and connectively coupled to the food, water and medicine storage portions. Also, the system includes an internal electronic fence transceiver in wireless communication with an external electronic fence transceiver, the internal electronic fence transceiver disposed generally within the housing and the external electronic fence transceiver disposed externally and remote from the housing, wherein the internal electronic fence transceiver activates the external electronic fence transceiver when the external electronic fence transceiver is at least a predetermined distance from the housing.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] A better understanding of the claimed subject matter can be obtained when the following detailed description of the disclosed embodiments is considered in conjunction with the following figures.

[0006] FIG. **1** is a diagram illustrating a front view of an animal care device **100** according to one embodiment of the present disclosure;

[0007] FIG. **2**A is a side view of tray **118** according to one embodiment of device **100** according to one embodiment of the present disclosure;

[0008] FIG. **2**B is a top view of tray **118** according to one embodiment of device **100** according to one embodiment of the present disclosure;

[0009] FIG. **3** is a rear view of device **100** according to one embodiment of the present disclosure;

[0010] FIG. **4** is a side view of device **100** according to one embodiment of the present disclosure;

[0011] FIG. **5** is a block diagram of a docking station **500** for device **100** according to one embodiment of the present disclosure;

[0012] FIGS. **6-8** are diagrams illustrating information flows in exemplary embodiments of an animal care device **100** according to the teachings of the present disclosure;

[0013] FIGS. **9**A and **9**B are illustrations of an exemplary embodiment of a smart collar **608** and a dog wearing the smart collar **608** according to the teachings of the present disclosure;

[0014] FIGS. **10**A and **10**B are illustrations of an exemplary embodiment of a smart collar and a dog wearing the smart collar **608** according to the teachings of the present disclosure;

[0015] FIG. **11** is a diagram illustrating a variety of applications for a smart collar **608** according to the teachings of the present disclosure;

[0016] FIGS. **12** and **13** are diagrams illustrating information flows in exemplary embodiments of an animal care device **100** operating cooperatively with a smart collar **608** according to the teachings of the present disclosure;

[0017] FIG. **14** is a simplified block diagram of an exemplary embodiment of an animal care device **100** in operation with a smart collar **608**/smart harness **610** according to the teachings of the present disclosure;

[0018] FIG. **15** is a simplified diagram of another exemplary embodiment of an animal care device **800** in operation with a plurality of user computing devices **602** according to the teachings of the present disclosure;